

PROJECT LICENSED PROFESSIONAL CERTIFICATES

W. GREGORY HESS (Nov 22, 2022 14:49 PST)	_		
W. GREGORY HESS			
Nov 22, 2022			
AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.
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NOTES:

THIS PLAN SET WAS DEVELOPED ELECTRONICALLY UNDER THE DIRECT SUPERVISION OF THE LICENSED PROFESSIONALS THAT HAVE AFFIXED THEIR SIGNATURE TO THIS PAGE.

THIS SHEET SERVES AS THE CERTIFICATION BY THE ABOVE LICENSED PROFESSIONALS OF ALL SHEETS IN THIS PLAN SET WHERE THEIR STAMPS AND SIGNATURES APPEAR.

FILE NAME	T:\412348\XL6330 - I-5 Sno R	Br Painting\CAD\ContractPlans\XL6330_PS_01IN.dgn									Plot 4
TIME	8:42:18 AM				REGION STATE	FED.AID PROJ.NO.	1			I-5	PLAN REF NO
DATE	11/15/2022				10 WASH	1					CT1
PLOTTED BY	walgame				T TO WASE	1				SNOHOMISH RIVER BRIDGE (BN RR)	0
DESIGNED BY	E. WALGAMOTT				JOB NUMBER	1			Washington State	PAINTING	SHEET
ENTERED BY	E. WALGAMOTT				22A035				J		2
CHECKED BY	Y. KUANG				CONTRACT NO.	LOCATION NO.			Department of Transportation		OF
PROJ. ENGR.	C. ANDERSON						DATE	DATE		CERTIFICATION SHEET	20 SHEETS
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			P.E. STAMP BOX	P.E. STAMP BOX		OLKINIOATION OTILLI	SHEETS

DOT_RGG900 11/21/2022

SUMMARY OF QUANTITIES

		SUB-TOTAL	SUB-TOTAL	1		1		1	I	I		I			ı	1			
		*	**				GROUP 1	GROUP 2	GROUP 3										
ITEM	TOTAL	SECTION	SECTION	STD.	LINUT	ITEM	BRIDGE	BRIDGE	THIRD										
NO	QUANTITY	I-07.2(1) OF	I-07.2(2) OF	ITEM NO.	UNIT	ITEM	5/645E	5/645W	PARTY DAMAGES										
		STANDARD	STANDARD						DAMAGEG										
		SPECS	SPECS																
						PREPARATION													
1	LUMP SUM		LUMP SUM	0001	L.S.	MOBILIZATION	L.S.	L.S.								1			
							<u> </u>									1			
<u> </u>						STRUCTURE	<u> </u>									1			
2	LUMP SUM	1	LUMP SUM	4468	L.S.	CLEANING AND PAINTING	L.S.	L.S.								1			
3	6000.00		6000.00	4487	L.F.	SEALING AND CAULKING PACK RUST	3,000.00	3,000.00								1			
4	LUMP SUM		LUMP SUM	4469	L.S.	CONTAINMENT OF ABRASIVES	L.S.	L.S.								1			
5	1600000.00		1600000.00	4470	DOL	TESTING AND DISPOSAL OF CONTAINMENT WASTE	800,000.00	800,000.00											
6	400.00		400.00		EACH	REPLACE VACANT/DAMAGED OR LOOSE BOLT/RIVET WITH HS BOLT	200.00	200.00								1			
																1			
						EROSION CONTROL AND ROADSIDE PLANTING										1			
7	93.00		93.00	6403	DAY	ESC LEAD	47.00	46.00								1			
8	100000.00		100000.00	6490	DOL	EROSION/WATER POLLUTION CONTROL	50,000.00	50,000.00											
																1			
		1	1			TRAFFIC										1			
9	LUMP SUM	1	LUMP SUM	6971	L.S.	PROJECT TEMPORARY TRAFFIC CONTROL	L.S.	L.S.								1			
10	20.00	1	20.00	6982	S.F.	CONSTRUCTION SIGNS CLASS A	20.00									1			
11	14.00	1	14.00		DAY	RAILROAD PROTECTIVE SERVICES	7.00	7.00								1			
																1			
						OTHER ITEMS										1			
12	LUMP SUM		LUMP SUM	7003	L.S.	TYPE B PROGRESS SCHEDULE	L.S.	L.S.											
13	60000.00		60000.00	7715	DOL	FORCE ACCOUNT MISCELLANEOUS STEEL REPAIR	30,000.00	30,000.00											
14	2000.00		2000.00	7400	HR	TRAINING	1,000.00	1,000.00											
15	10000.00		10000.00			ROADSIDE CLEANUP	5,000.00	5,000.00											
16	75000.00		75000.00	7572	DOL	WORK ZONE SAFETY CONTINGENCY	37,500.00	37,500.00											
17	5.00	1	5.00	7725	DOL	REIMBURSEMENT FOR THIRD PARTY DAMAGE] [5.00										
18	2.00		2.00	7728	DOL	MINOR CHANGE	1.00	1.00											
19	LUMP SUM		LUMP SUM	7736	L.S.	SPCC PLAN	L.S.	L.S.											
20	2.00		2.00	7569	EACH	NO TRESPASSING SIGN	1.00	1.00											
21	LUMP SUM		LUMP SUM	7570	L.S.	HEALTH AND SAFETY PLAN	L.S.	L.S.											
22	10000.00		10000.00	7571	DOL	FA-SITE CLEANUP OF BIO. AND PHYSICAL HAZARDS	5,000.00	5,000.00											
																1			
		1	1	1]	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>		<u> </u>	1	<u> </u>		

GROUP	GROUP NUMBER	SR	CONTROL SECTION	TAX SCHEDULE	FUND PARTICIPANTS
LEGEND	1	005	312012	**	FEDERAL
	2	005	312012	**	FEDERAL
	3	005	312012	**	STATE

08/01/22		EJW R	REGION	STATE	FEDERAL AID PROJECT. NO.		1 5	SQ1
			10	WA	0055(254)			301
					_	Washington State	SNOHOMISH RIVER BRIDGE (BN RR)	SHEET
			JOB NU			Department of Transportation	PAINTING	3
			22A0	035/6				OF
			CONTRA				SUMMARY OF QUANTITIES	20
DATE	REVISION	BY	000	000				SHEETS

1-3/4" TEXT (RED)

1" TEXT

ORANGE BACKGROUND

3/8" TEXT

5" SYMBOL HEIGHT
"DANGER/PELIGRO" - BLACK TEXT ON
ORANGE BACKGROUND
WITH BLACK BORDER/ORANGE MARGIN.
"NO PEDESTRIAN" SYMBOL - BLACK
PEDESTRIAN AND BORDER,
RED DIAGONAL AND CIRCLE, WHITE
BACKGROUND.

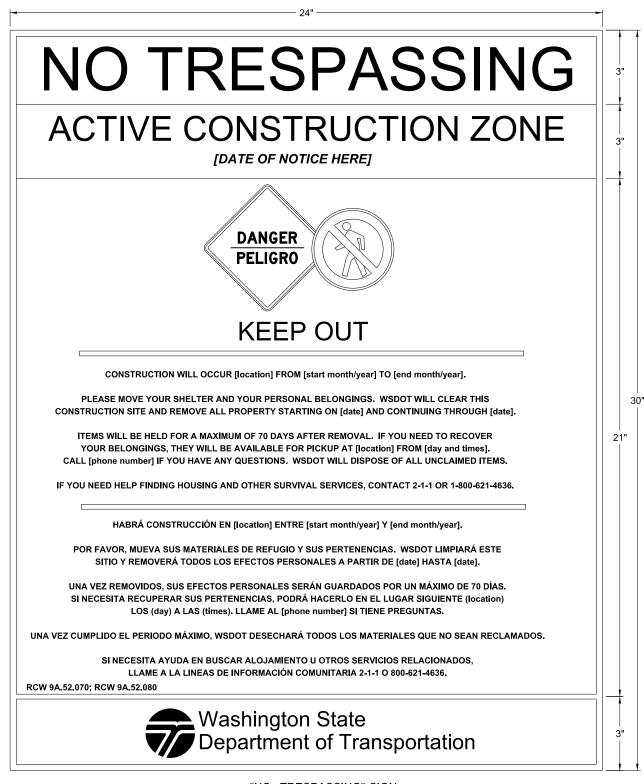
3/4" TEXT

1/4" TEXT

NOTES:

- 1. UNLESS OTHERWISE NOTED, ALL TEXT IS BLACK ARIAL BOLD.
- 2. UNLESS OTHERWISE NOTED, WHITE BACKGROUND WITH 1/4" RED BORDER.
- 3. ALL DETAILS DRAWN 'NOT TO SCALE'.

2" SYMBOL HEIGHT BLACK WITH BLACK TEXT



"NO TRESPASSING" SIGN

FILE NAME	T:\412348\XL6330 - I-5 Sno R I	Br Painting\CAD\ContractPlans\XL6330_PS_NTS.dgn				·					Plot 6
TIME	4:29:34 PM				REGION STATE	FED.AID PROJ.NO.				I-5	PLAN REF NO
DATE	11/14/2022			-	10 WASH					.	NTS1
PLOTTED BY	walgame				IU WASE					SNOHOMISH RIVER BRIDGE (BN RR)	14101
DESIGNED BY	E. WALGAMOTT				JOB NUMBER	1			Washington State	PAINTING	SHEET
ENTERED BY	E. WALGAMOTT				22A035				_		4
CHECKED BY	Y. KUANG				CONTRACT NO.	LOCATION NO.			Department of Transportation		OF
PROJ. ENGR.	C. ANDERSON						DATE	DATE	-	NO TRESPASSING SIGN	20 SHEETS
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			P.E. STAMP BOX	P.E. STAMP BOX			J. SILEETS

SEISMIC

ON PIER -

RESTRAINERS

& PIER

SEC.16 & 21, T.29N, R.5E, W.M.

CITY OF EVERETT

- & STRINGERS

LIMITS OF PAINTING PAINT STEEL BELOW DECK ONLY

PLAN

ELEVATION

PIER NO. 5-E

EXIST BNSF

LONGITUDINAL SEISMIC RESTRAINERS ON BRIDGE

DECK SOFFIT NOT TO

CLEANED OR PAINTED

PIER NO. 3-E

GIRDER & E ROADWAY

— € GIRDERS

& PIER

TRACKS

E. GRAND AVE. /

. MARINE VIEW DR.

¢ HINGE

STAT 10 WASH R. Torgeson 11/02/2022 JOB NUMBER 22A035 Bridge Projects Engr. M. Rosa Prelim. Plan By DATE REVISION Architect/Specialist



- EXIST. BRIDGE NO. 5/645W

\SMITH ISLAND RD.

HINGE

SMITH ISLAND RD.

- MIN. ROADWAY CONST. CLEARANCE, SEE SHEET BA4

HINGE

PIER NO. 6-E

- LONGITUDINAL SEISMIC RESTRAINERS ON

NOT TO BE CLEANED OR

BRIDGE DECK SOFFIT

I-5 SNOHOMISH RIVER BRIDGE (BN RR) **PAINTING**

PIER NO. 8-E

- LONGITUDINAL SEISMIC RESTRAINERS ON

BRIDGE DECK SOFFIT

NOT TO BE CLEANED OR

CLEANING AND PAINTING BRIDGE NO. 5/645E, SEE

BRIDGE SHEET BA4 FOR

DETAILS

- STOCKPILED SOIL, SIZE AND LOCATION

APPROXIMATE

PIER NO. 9-E

-€ NB 1-5 TO SR 529 4.3 MILES

BRIDGE NO. 5/645E LAYOUT

BA1

1-5

LEGEND

CENTERLINE

DIAMETER

PLATE

ABBREVIATIONS

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS

RESIN BONDED ANCHOR

ASTM

AMERICAN STANDARDS FOR TESTING

AND MATERIALS CONST. CONSTRUCTION

EQ. EQUAL EXIST. EXISTING

HORIZ. HORIZONTAL POUNDS

мах. MAXIMUM MIN. MINIMIJM

NO. NIIMBER

0.C. ON CENTER OPP. OPPOSITE

PLF POUNDS PER LINEAL FOOT

PSF POUNDS PER SQUARE FOOT

SHT. SHFFT SPA SPACE

STD. STANDARD

STEEL

SYM. SYMMETRICAL

TYP. TYPICAL

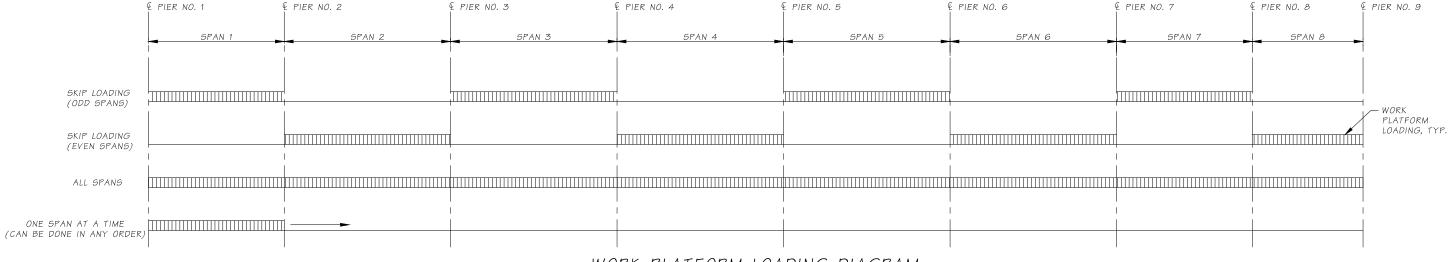
VERT. VERTICAL

WASHINGTON STATE DEPARTMENT WSD01

OF TRANSPORTATION

CONSTRUCTION LOADING NOTES FOR BRIDGE SPANS

- A. THE CONTRACTOR MAY SUPPORT A TEMPORARY BELOW-DECK WORK PLATFORM FROM THE BRIDGE SPAN. THE PLATFORM MAY EXTEND FROM PIER TO PIER. THE WIDTH OF THE PLATFORM SHALL NOT EXCEED THE OUT-TO-OUT WIDTH OF THE EXTERIOR GIRDER CENTERLINES PLUS 5-FEET ON BOTH SIDES.
- B. THE BELOW DECK WORK PLATFORM SHALL BE CONFIGURED AS SHOWN IN THE TYPICAL SECTION ON SHEET BA4.
- C. THE TOTAL WEIGHT OF THE PLATFORM (SELF-WEIGHT PLUS IMPOSED LOADS) SHALL NOT EXCEED 25 PSF
- D. THE PLATFORM SHALL BE SUSPENDED FROM THE GIRDER BOTTOM FLANGE OF ALL THREE GIRDERS. THE MAXIMUM CONSTRUCTION LOAD SHALL BE 0.465 KLF FOR THE EXTERIOR GIRDERS, AND 0.630 KLF FOR THE INTERIOR GIRDERS. ATTACHMENTS TO THE CROSS FRAMES, FLOOR TRUSSES, STRINGERS OR BRACING IS NOT ALLOWED, THE MAXIMUM WORK PLATFORM HANGER SPACING SHALL BE 12 FEET ALONG THE CENTERLINE
- 2. THE MAXIMUM REACTION AT ANY ATTACHMENT POINT SHALL NOT EXCEED 6,500 POUNDS.
- 3. ATTACHMENT TO THE BRIDGE SHALL BE MADE WITH CLAMP OR PADDED WRAP TYPE CONNECTORS. HOLES SHALL NOT BE MADE IN BRIDGE MEMBERS. NO WELDING TO BRIDGE MEMBERS IS ALLOWED. METHODS OF ATTACHMENT TO THE BRIDGE SHALL BE SUBMITTED IN ACCORDANCE WITH THE STANDARD SPECIFICATION SECTION 6-07.3(2)F.
- 4. WORKING DRAWINGS AND CALCULATIONS (TYPE 2E) SHALL BE SUBMITTED IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 1-05.3. WORKING DRAWINGS AND CALCULATIONS SHALL SHOW THAT ALL OF THE ABOVE CONSTRAINTS HAVE BEEN MET FOR ALL CONSTRUCTION LOADS. CONSTRUCTION LOADS SHALL NOT BE PLACED ON THE BRIDGE UNTIL THE ASSOCIATED WORKING DRAWINGS AND CALCULATIONS HAVE BEEN REVIEWED AND ACCEPTED BY WSDOT
- 5. THE EXISTING BRIDGES HAVE BEEN CHECKED FOR THE LOADING PATTERNS SHOWN IN THE DIAGRAMS ON THIS SHEET AND THE LOADS LISTED ABOVE. FOR ANY OTHER LOADING PATTERN, THE CONTRACTOR SHALL SUBMIT THE LOADING PATTERN TO WSDOT FOR REVIEW AND APPROVAL PRIOR TO APPLYING THE LOADS.



WORK PLATFORM LOADING DIAGRAM

THE LOADING PATTERN SHOWN ABOVE IS BASED ON THE LOADING DESCRIBED ON THIS SHEET AND THE BELOW DECK PLATFORM LIMITS SHOWN ON BA4.

	Bridge Design Engr	. B. Khaleghi					REGION NO	STATE	FED AID PROJ NO	П
•	Supervisor									1
	Designed By	B. Lindstrom	11/02/2022				10	WASH		1
	Checked By	A. Olson	11/02/2022							1
	Detailed By	R. Torgeson	11/02/2022					IUMBER		1
,	Bridge Projects Eng	ır. M. Rosa					7 22	035		1
2	Prelim. Plan By									l
	Architect/Specialist			DATE	REVISIO	N BY				1

BRIDGE AND **STRUCTURES** OFFICE





I-5 SNOHOMISH RIVER BRIDGE (BN RR) PAINTING

CONSTRUCTION LOADING NOTES

BRIDGE NO. 5/645E 20

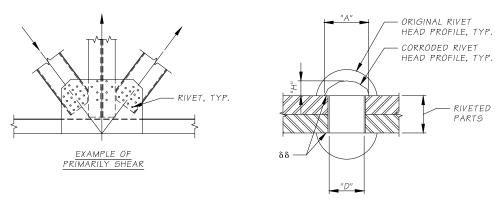
BA2

- 1. EXISTING RIVETS SHALL BE EVALUATED AFTER ABRASIVE BLASTING AND PRIMING OPERATIONS ARE COMPLETED AND SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH THE RIVET EVALUATION CRITERIA SHOWN ON THIS SHEET. NEW H.S. BOLTS SHALL BE INSTALLED AND TENSIONED IN ACCORDANCE WITH SECTION 6-03.3(33). AND PREPARED FOR PAINT IN ACCORDANCE WITH SECTION 6-07.3(11)A. EXISTING HOLES MAY BE REAMED TO RIVET DIAMETER +1/8" MAXIMUM TO FACILITATE BOLT INSTALLATION IF NEEDED.
- 2. PRIOR TO STARTING ANY RIVET REMOVAL, THE CONTRACTOR SHALL SUBMIT A TYPE 2 WORKING DRAWING DETAILING PROPOSED RIVET REMOVAL METHODS TO THE ENGINEER. ACCEPTANCE WILL REQUIRE DEMONSTRATIONS BY THE CONTRACTOR TO ENSURE NO DAMAGE WILL OCCUR TO EXISTING MEMBER TO REMAIN. NO FLAME CUTTING METHODS WILL BE PERMITTED.
- 3. BOLTS SHALL CONFORM TO ASTM F3125 GR A325 AND SHALL BE GALVANIZED. BOLTS REPLACING RIVETS SHALL HAVE A DIAMETER MATCHING THE DIAMETER OF THE RIVET THEY REPLACE. THREADS SHALL BE EXCLUDED FROM THE SHEAR PLANES.
- 4. AT ANY CONNECTION, ONLY ONE RIVET MAY BE REMOVED AND REPLACED AT A TIME. THE REPLACEMENT BOLT SHALL BE FULLY INSTALLED AND TIGHTENED BEFORE THE NEXT RIVET MAY BE REMOVED.

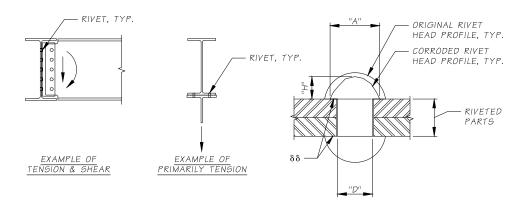
RIVET EVALUATION CRITERIA:

RIVETS SHALL BE REPLACED IF THEY FAIL TO MEET ANY ONE OF THESE CRITERIA.

- 1. REPLACE RIVET IF THERE IS SEPARATION BETWEEN THE SOUND METAL SURFACES OF EITHER RIVET HEAD AND THE RIVETED PARTS. (SEE SYMBOL $\delta\delta$)
- 2. REPLACE RIVET IF THE RIVET VISUALLY APPEARS TO BE LOOSE FOR ANY REASON. RIVETS VISUALLY SUSPECT OF BEING LOOSE SHALL BE CONFIRMED LOOSE IF IT CAN BE FELT TO MOVE AFTER BEING STRUCK ON THE SIDE OF THE HEAD IN A DIRECTION APPROXIMATELY PERPENDICULAR TO ITS SHANK WITH A 40 OZ HAMMER.
- 3. REPLACE RIVET IF SECTION LOSS IS EQUAL TO OR GREATER THAN THE DIAGRAM SHOWN ON THIS SHEET. THE ENGINEER SHALL BE CONSULTED IF UNCLEAR AS TO THE RIVET LOADING CONDITION OR USE THE SECTION LOSS CRITERIA FOR "UNKNOWN" LOADING CONDITION. FOR RIVETS WITH IRREGULAR SECTION LOSS, CONTACT THE ENGINEER FOR DIRECTION.



RIVET LOADING CONDITION - PRIMARILY SHEAR



RIVET LOADING CONDITION PRIMARILY TENSION, TENSION & SHEAR, OR UNKNOWN

	MINIMUM	RIVET DIMENSIO	NS	
	LOADING: PRI	MARILY SHEAR		SION & SHEAR, R UNKNOWN
RIVET SHANK DIAMETER "D"	MINIMUM HEAD DIAMETER "A"	MINIMUM HEAD HEIGHT "A"	MINIMUM HEAD DIAMETER "A"	MINIMUM HEAD HEIGHT "A"
5/8"	7/8"	3/16"	1"	3/8"
3/4"	1"	1/4"	11/8"	7/16"
7/8"	11/8"	3/8"	1¼"	9/16"

FED AID PROJ NO Bridge Design Engr. B. Khaleghi STAT Supervisor 10 WASH Designed By B Lindstrom 11/02/2022 Checked By JOB NUMBER Detailed By R. Torgeson 11/02/2022 22A035 Bridge Projects Engr. M. Rosa Prelim. Plan By DATE REVISION Architect/Specialist

BRIDGE AND **STRUCTURES** OFFICE





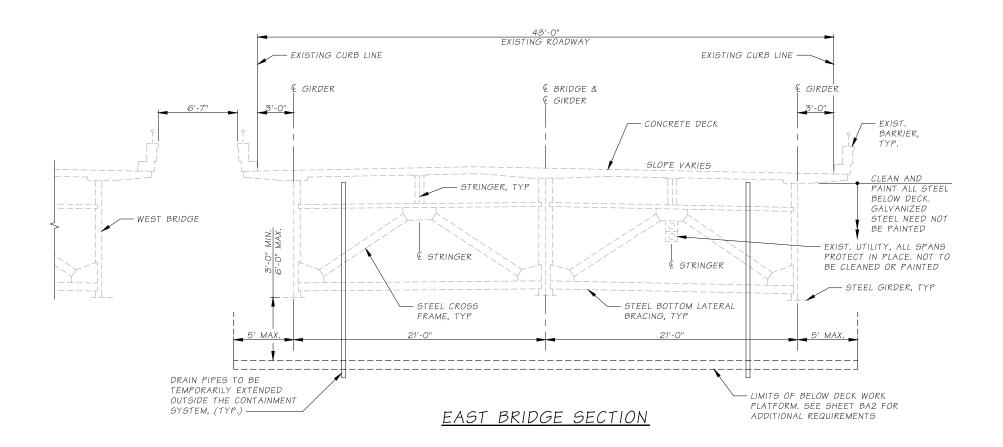


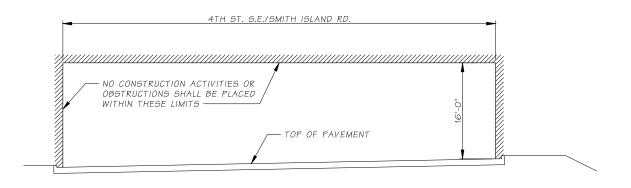
SNOHOMISH RIVER BRIDGE (BN RR) **PAINTING**

BRIDGE NO. 5/645E

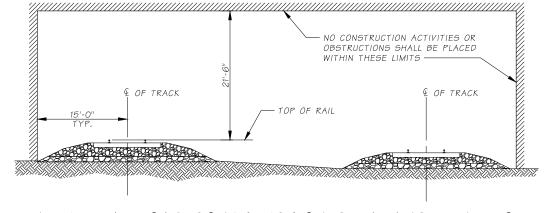
RIVET EVALUATION CRITERIA

BA3









MINIMUM RAILROAD CONSTRUCTION CLEARANCE ENVELOPE (DIMENSIONS ARE NORMAL TO RAILROAD TRACK)

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NO.	Bridge Design Engr.	B. Khaleghi					REGION NO	STATE	FED AID PROJ NO	Ξ
λB	Supervisor									
<u>ج</u> ا	Designed By	B. Lindstrom	11/02/2022				10	WASH		
	Checked By	A. Olson	11/02/2022							
	Detailed By	R. Torgeson	11/02/2022					JMBER		
ž	Bridge Projects Engr	. M. Rosa					22A	035		
,,	Prelim. Plan By									
	Architect/Specialist			DATE	REVISION	BY				

BRIDGE AND **STRUCTURES** OFFICE



	Washingto Departme	on State nt of Transportation
k	1	1601 5th Avenue, Suite 1600 Seattle, WA 98101
	KIH	206.622.5822

I - 5
SNOHOMISH RIVER BRIDGE (BN RR)
PAINTING

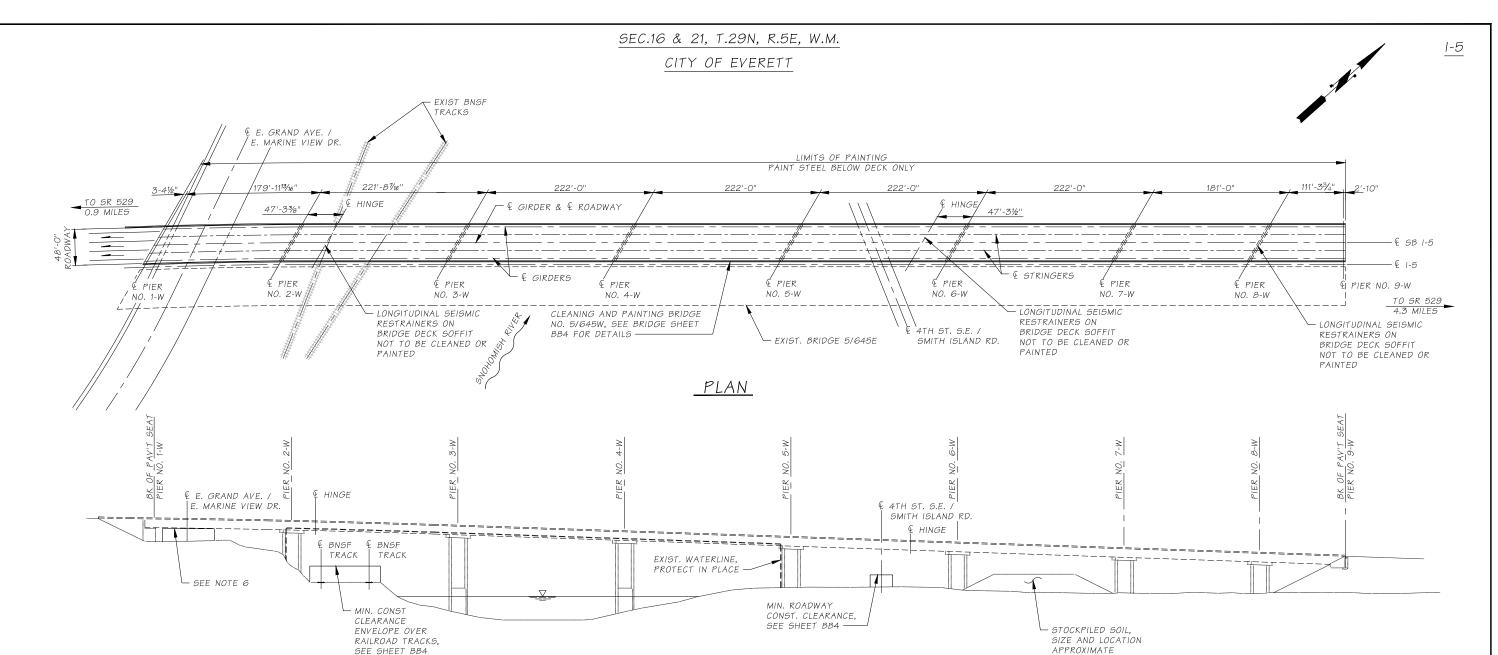
BRIDGE NO. 5/645E

TYPICAL BRIDGE SECTIONS AND CLEARANCE ENVELOPES

Rick SR

BA4

SHEET NO.



GENERAL NOTES

1. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION

2. EXISTING FEATURES AND DIMENSIONS SHOWN ARE BASED ON THE INSPECTION REPORTS AND ORIGINAL DESIGN PLANS. ALL RELEVANT DETAILS AND DIMENSIONS SHALL BE FIELD MEASURED AND VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS AND PROCEEDING WITH CONSTRUCTION.

- 3. REMOVED PAINT, DEBRIS AND SPENT ABRASIVE BLAST MEDIA SHALL BE COLLECTED AND REMOVED FROM THE BRIDGE DAILY, AT A MINIMUM, AND SHALL NOT EXCEED THE ALLOWED TEMPORARY CONSTRUCTION LOADS AT ANY TIME.
- 4. PAINTING SHALL BE COMPLETED IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 6-07.
- 5. UNLESS NOTED OTHERWISE, ALL EXISTING STEEL SURFACES REQUIRE FULL PAINT REMOVAL PRIOR TO APPLYING NEW PAINT SYSTEM. SEE STD SPECIFICATION 6-07.3(10)E FOR SURFACE PREPARATION.
- 6. MAINTAIN EXISTING VERTICAL CLEARANCE OVER LIVE TRAFFIC LANES. SEE TRAFFIC CONTROL PLANS FOR LANE CLOSURE OPTIONS.

DATE

ELEVATION

FED AID PROJ NO STATE Bridge Design Engr. B. Khaleghi Supervisor 10 WASH Designed By B Lindstrom 11/02/2022 Checked By JOB NUMBER Detailed By R. Torgeson 11/02/2022 22A035 Bridge Projects Engr. M. Rosa Prelim. Plan By

REVISION

BRIDGE AND **STRUCTURES** OFFICE



Washington State Washington State Department of Transportation 1601 5th Avenue, Suite 1600 Seattle, WA 98101 206.622.5822

I-5
SNOHOMISH RIVER BRIDGE (BN RR)
PAINTING
BRIDGE NO. 5/645W

LAYOUT

BRIDGE PAINTING

20

BB1

Architect/Specialist

LEGEND

¢ CENTERLINE

DIAMETER

PLATE

ABBREVIATIONS

AASHTO AMERICAN ASSOCIATION OF STATE

HIGHWAY AND TRANSPORTATION OFFICIALS
AB. RESIN BONDED ANCHOR

ASTM AMERICAN STANDARDS FOR TESTING

AND MATERIALS

CONST CONSTRUCTION EQUAL EXIST. EXISTING HORIZ. HORIZONTAL LBS POUNDS мах. MAXIMUM MIN. MINIMIJM NO. NIIMBER 0.C. ON CENTER

OPP. OPPOSITE

PLF POUNDS PER LINEAL FOOT PSF POUNDS PER SQUARE FOOT

SHT. SHEET
SPA. SPACE
STD. STANDARD
STL. STEEL
SYM. SYMMETRICAL
TYP. TYPICAL
VERT. VERTICAL

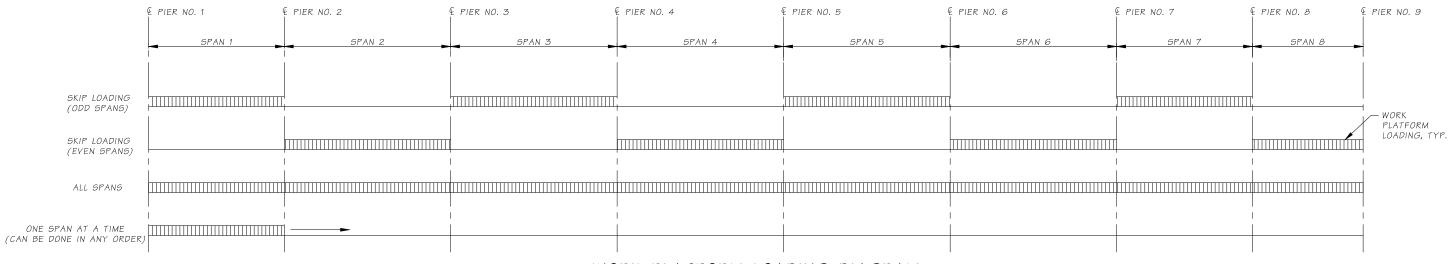
WSDOT WASHINGTON STATE DEPARTMENT

OF TRANSPORTATION

CONSTRUCTION LOADING NOTES FOR BRIDGE SPANS

1. TEMPORARY BELOW DECK WORK PLATFOR

- A. THE CONTRACTOR MAY SUPPORT A TEMPORARY BELOW-DECK WORK PLATFORM FROM THE BRIDGE SPAN. THE PLATFORM MAY EXTEND FROM PIER TO PIER. THE WIDTH OF THE PLATFORM SHALL NOT EXCEED THE OUT-TO-OUT WIDTH OF THE EXTERIOR GIRDER CENTERLINES PLUS 5-FEET ON BOTH SIDES.
- B. THE BELOW DECK WORK PLATFORM SHALL BE CONFIGURED AS SHOWN IN THE TYPICAL SECTION ON SHEET BB4.
- C. THE TOTAL WEIGHT OF THE PLATFORM (SELF-WEIGHT PLUS IMPOSED LOADS) SHALL NOT EXCEED 25 PSF.
- D. THE PLATFORM SHALL BE SUSPENDED FROM THE GIRDER BOTTOM FLANGE OF ALL THREE GIRDERS. THE MAXIMUM CONSTRUCTION LOAD SHALL BE 0.465 KLF FOR THE EXTERIOR GIRDERS, AND 0.630 KLF FOR THE INTERIOR GIRDERS. ATTACHMENTS TO THE CROSS FRAMES, FLOOR TRUSSES, STRINGERS OR BRACING IS NOT ALLOWED. THE MAXIMUM WORK PLATFORM HANGER SPACING SHALL BE 12 FEET ALONG THE CENTERLINE OF THE GIRDER.
- 2. THE MAXIMUM REACTION AT ANY ATTACHMENT POINT SHALL NOT EXCEED 6,500 POUNDS.
- 3. ATTACHMENT TO THE BRIDGE SHALL BE MADE WITH CLAMP OR PADDED WRAP TYPE CONNECTORS. HOLES SHALL NOT BE MADE IN BRIDGE MEMBERS. NO WELDING TO BRIDGE MEMBERS IS ALLOWED. METHODS OF ATTACHMENT TO THE BRIDGE SHALL BE SUBMITTED IN ACCORDANCE WITH THE STANDARD SPECIFICATION SECTION 6-07.3(2)F.
- 4. WORKING DRAWINGS AND CALCULATIONS (TYPE 2E) SHALL BE SUBMITTED IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 1-05.3. WORKING DRAWINGS AND CALCULATIONS SHALL SHOW THAT ALL OF THE ABOVE CONSTRUCTS HAVE BEEN MET FOR ALL CONSTRUCTION LOADS. CONSTRUCTION LOADS SHALL NOT BE PLACED ON THE BRIDGE UNTIL THE ASSOCIATED WORKING DRAWINGS AND CALCULATIONS HAVE BEEN REVIEWED AND ACCEPTED BY WEDOT.
- 5. THE EXISTING BRIDGES HAVE BEEN CHECKED FOR THE LOADING PATTERNS SHOWN IN THE DIAGRAMS ON THIS SHEET AND THE LOADS LISTED ABOVE. FOR ANY OTHER LOADING PATTERN, THE CONTRACTOR SHALL SUBMIT THE LOADING PATTERN TO WSDOT FOR REVIEW AND APPROVAL PRIOR TO APPLYING THE LOADS.



WORK PLATFORM LOADING DIAGRAM

THE LOADING PATTERN SHOWN ABOVE IS BASED ON THE LOADING DESCRIBED ON THIS SHEET AND THE BELOW DECK PLATFORM LIMITS SHOWN ON BB4.

NO.	Bridge Design Engr.	B. Khaleghi						REGION NO	STATE	FED AID PROJ NO	
ЭВ	Supervisor										
⋍	Designed By	B. Lindstrom	11/02/2022					10	WASH		
	Checked By	A. Olson	11/02/2022								
	Detailed By	R. Torgeson	11/02/2022						UMBER		
2	Bridge Projects Engr	. M. Rosa						22A	035		
0,1	Prelim. Plan By										
	Architect/Specialist			DATE	REVISION	E	BY				

BRIDGE AND STRUCTURES OFFICE





I-5 SNOHOMISH RIVER BRIDGE (BN RR) PAINTING

BRIDGE NO. 5/645W

CONSTRUCTION LOADING NOTES

BB2

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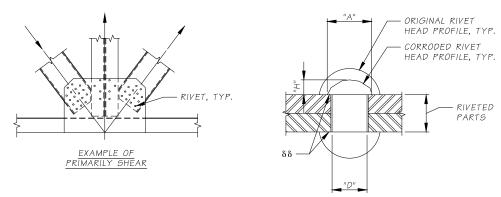
Rick Torgeson on: 1115/2022 9:22 AM File: V:12200223 (Snohomish River Bridge SR ______ JOB NO. _____ SHEET

- 1. EXISTING RIVETS SHALL BE EVALUATED AFTER ABRASIVE BLASTING AND PRIMING OPERATIONS ARE COMPLETED AND SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH THE RIVET EVALUATION CRITERIA SHOWN ON THIS SHEET. NEW H.S. BOLTS SHALL BE INSTALLED AND TENSIONED IN ACCORDANCE WITH SECTION 6-03.3(33). AND PREPARED FOR PAINT IN ACCORDANCE WITH SECTION 6-07.3(11)A. EXISTING HOLES MAY BE REAMED TO RIVET DIAMETER +1/8" MAXIMUM TO FACILITATE BOLT INSTALLATION IF NEEDED.
- 2. PRIOR TO STARTING ANY RIVET REMOVAL, THE CONTRACTOR SHALL SUBMIT A TYPE 2 WORKING DRAWING DETAILING PROPOSED RIVET REMOVAL METHODS TO THE ENGINEER. ACCEPTANCE WILL REQUIRE DEMONSTRATIONS BY THE CONTRACTOR TO ENSURE NO DAMAGE WILL OCCUR TO EXISTING MEMBER TO REMAIN. NO FLAME CUTTING METHODS WILL BE PERMITTED.
- 3. BOLTS SHALL CONFORM TO ASTM F3125 GR A325 AND SHALL BE GALVANIZED. BOLTS REPLACING RIVETS SHALL HAVE A DIAMETER MATCHING THE DIAMETER OF THE RIVET THEY REPLACE. THREADS SHALL BE EXCLUDED FROM THE SHEAR PLANES.
- 4. AT ANY CONNECTION, ONLY ONE RIVET MAY BE REMOVED AND REPLACED AT A TIME. THE REPLACEMENT BOLT SHALL BE FULLY INSTALLED AND TIGHTENED BEFORE THE NEXT RIVET MAY BE REMOVED.

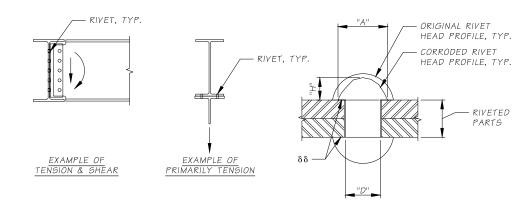
RIVET EVALUATION CRITERIA:

RIVETS SHALL BE REPLACED IF THEY FAIL TO MEET ANY ONE OF THESE CRITERIA.

- 1. REPLACE RIVET IF THERE IS SEPARATION BETWEEN THE SOUND METAL SURFACES OF EITHER RIVET HEAD AND THE RIVETED PARTS. (SEE SYMBOL $\delta\delta$)
- 2. REPLACE RIVET IF THE RIVET VISUALLY APPEARS TO BE LOOSE FOR ANY REASON. RIVETS VISUALLY SUSPECT OF BEING LOOSE SHALL BE CONFIRMED LOOSE IF IT CAN BE FELT TO MOVE AFTER BEING STRUCK ON THE SIDE OF THE HEAD IN A DIRECTION APPROXIMATELY PERPENDICULAR TO ITS SHANK WITH A 40 OZ HAMMER.
- 3. REPLACE RIVET IF SECTION LOSS IS EQUAL TO OR GREATER THAN THE DIAGRAM SHOWN ON THIS SHEET. THE ENGINEER SHALL BE CONSULTED IF UNCLEAR AS TO THE RIVET LOADING CONDITION OR USE THE SECTION LOSS CRITERIA FOR "UNKNOWN" LOADING CONDITION. FOR RIVETS WITH IRREGULAR SECTION LOSS, CONTACT THE ENGINEER FOR DIRECTION.



RIVET LOADING CONDITION - PRIMARILY SHEAR



RIVET LOADING CONDITION PRIMARILY TENSION, TENSION & SHEAR, OR UNKNOWN

MINIMUM RIVET DIMENSIONS											
	LOADING: PRI	MARILY SHEAR	LOADING: TENSION & SHEAR, TENSION OR UNKNOWN								
RIVET SHANK DIAMETER "D"	MINIMUM HEAD DIAMETER "A"	MINIMUM HEAD HEIGHT "A"	MINIMUM HEAD DIAMETER "A"	MINIMUM HEAD HEIGHT "A"							
5/8"	7/8"	3/16"	1"	3/8"							
3/4"	1"	1/4"	11/8"	7/16"							
7/8"	11/8"	3/8"	11/4"	9/16"							

Bridge Design En	gr. B. Khaleghi					REGION NO	STATE	FED AID PROJ NO
Supervisor								
Designed By	B. Lindstrom	11/02/2022				10	WASH	
Checked By	A. Olson	11/02/2022				1		
Detailed By	R. Torgeson	11/02/2022					UMBER	
Bridge Projects E	ngr. M. Rosa] 22A	035	
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Architect/Speciali	st		DATE	REVISION	BY	1		i

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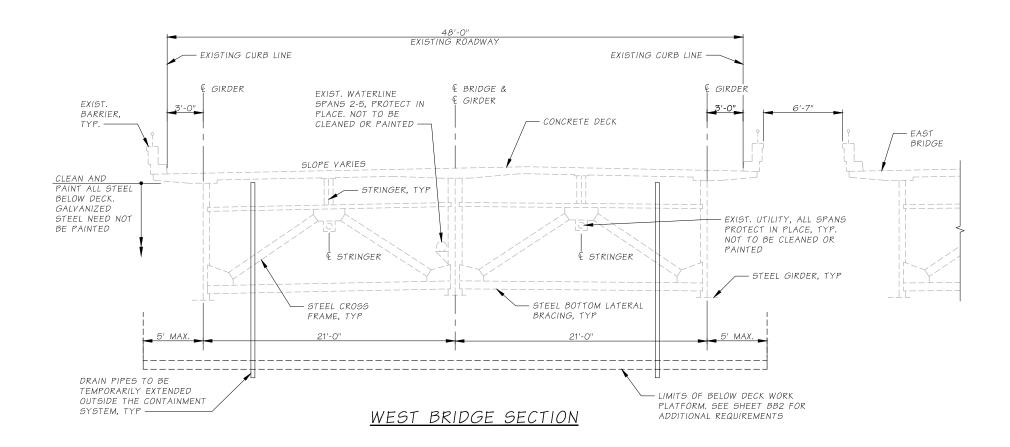


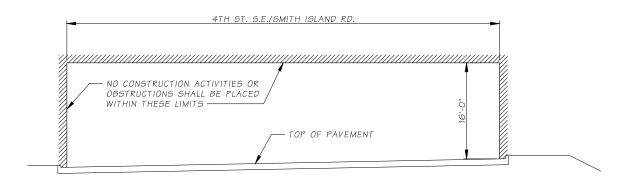




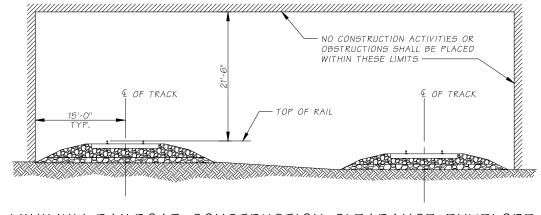
SNOHOMISH RIVER BRIDGE (BN RR) **PAINTING**

BB3





MINIMUM ROADWAY CONSTRUCTION CLEARANCE ENVELOPE (DIMENSIONS ARE NORMAL TO THE ROAD)



MINIMUM RAILROAD CONSTRUCTION CLEARANCE ENVELOPE (DIMENSIONS ARE NORMAL TO RAILROAD TRACK)

Š	Bridge Design Engr.	B. Khaleghi					REGION NO	STATE	FED AID PROJ NO	
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	Checked By	A. Olson	11/02/2022							l
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	Architect/Specialist			DATE	REVISION	BY				ı

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ı.	Washingto Departme	on State nt of Transportation
A BLANCE	127ff	1601 5th Avenue, Suite 1600 Seattle, WA 98101 206.622.5822

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SNOHOMISH RIVER BRIDGE (BN RR)
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TYPICAL BRIDGE SECTIONS AND CLEARANCE ENVELOPES

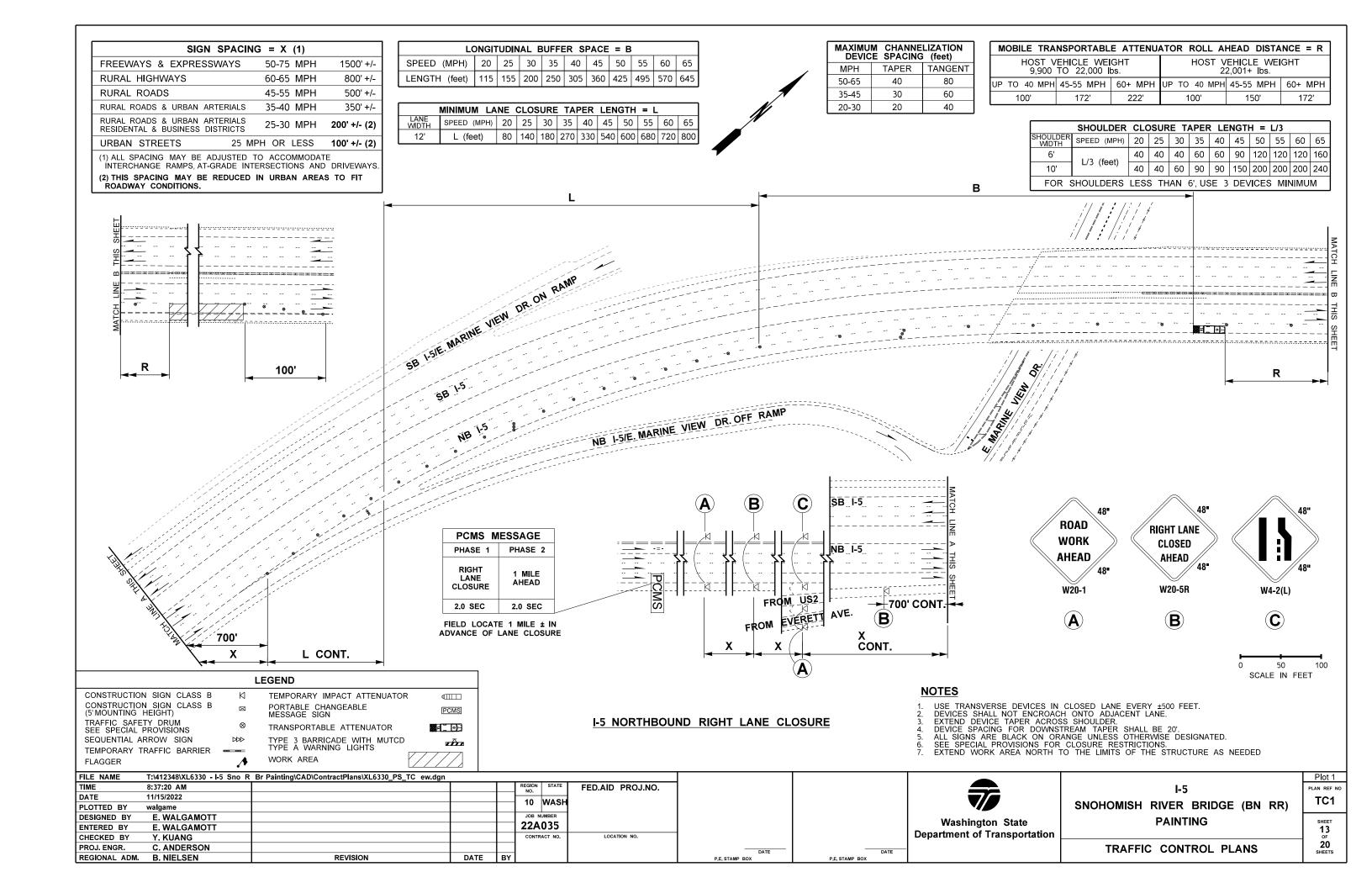
BB4

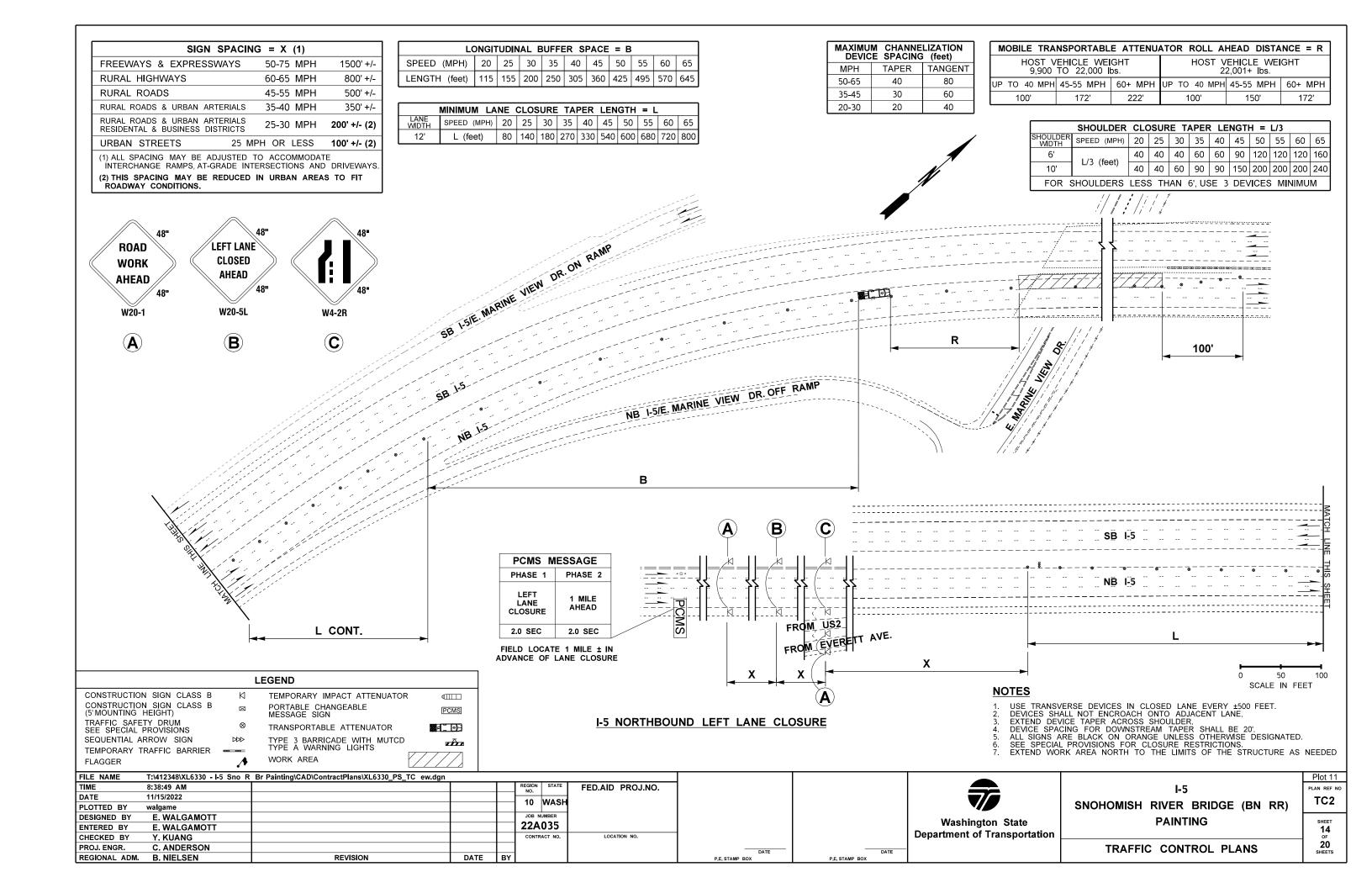
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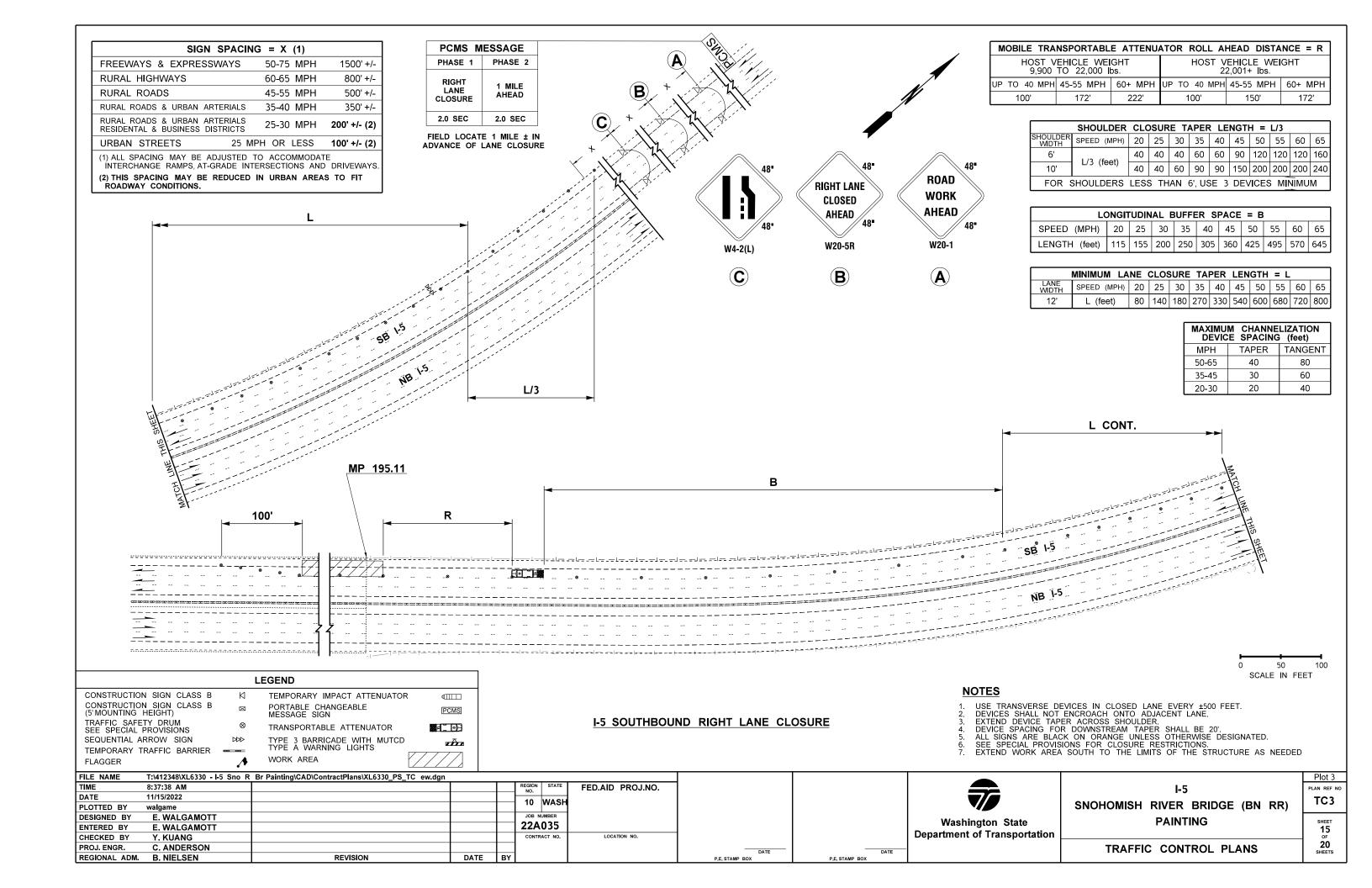
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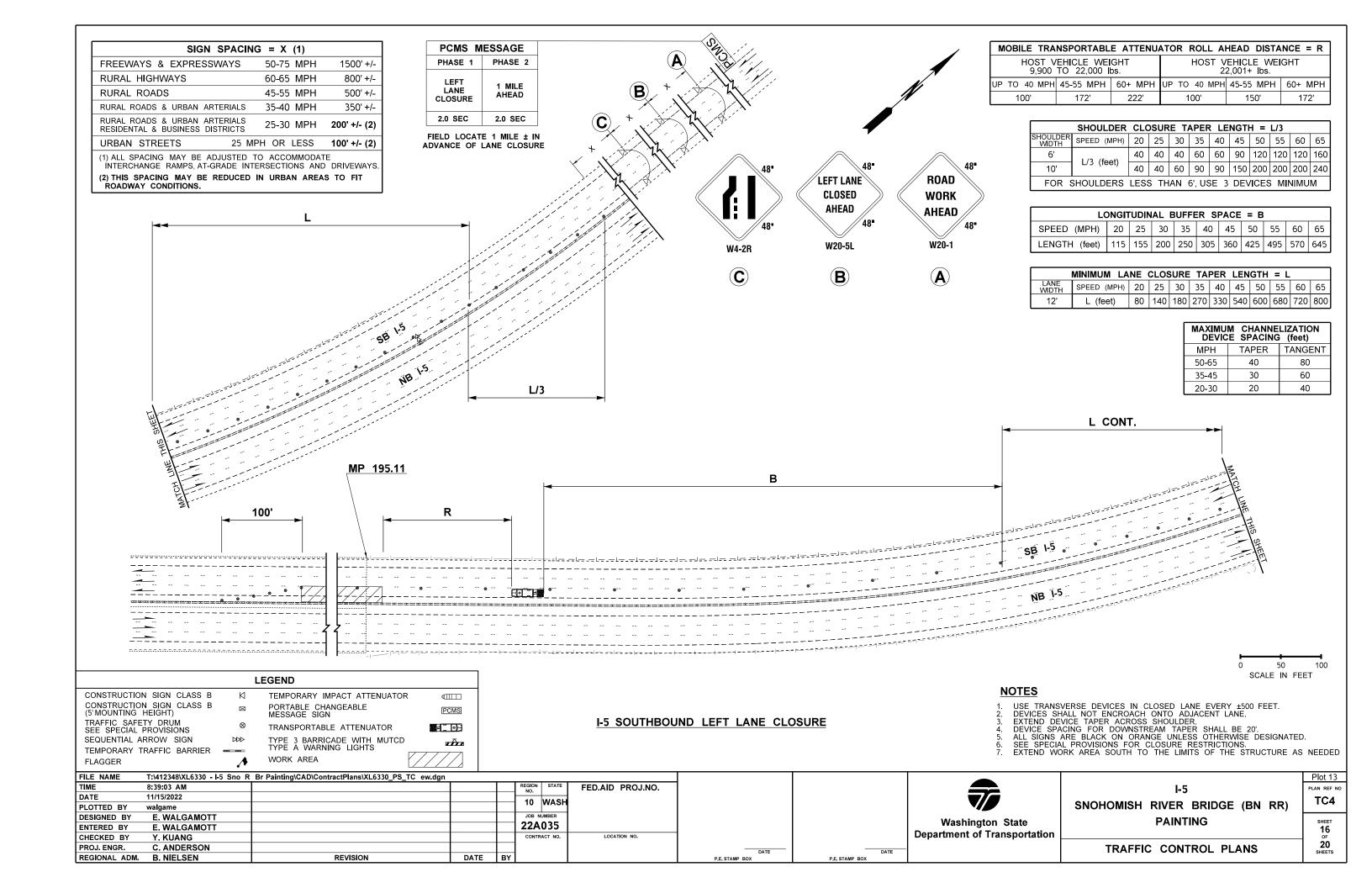
Rick SR

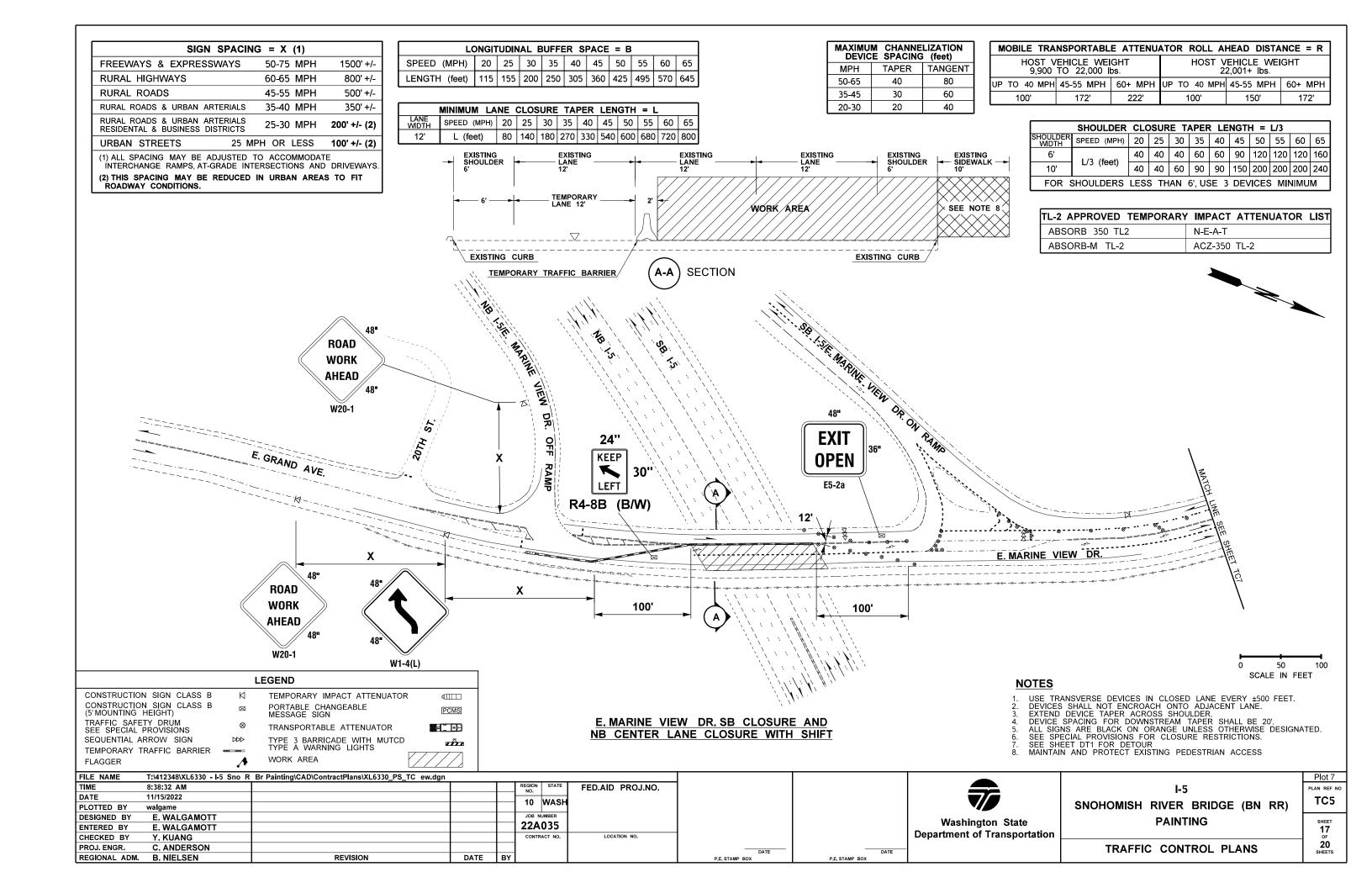
BRIDGE NO. 5/645W

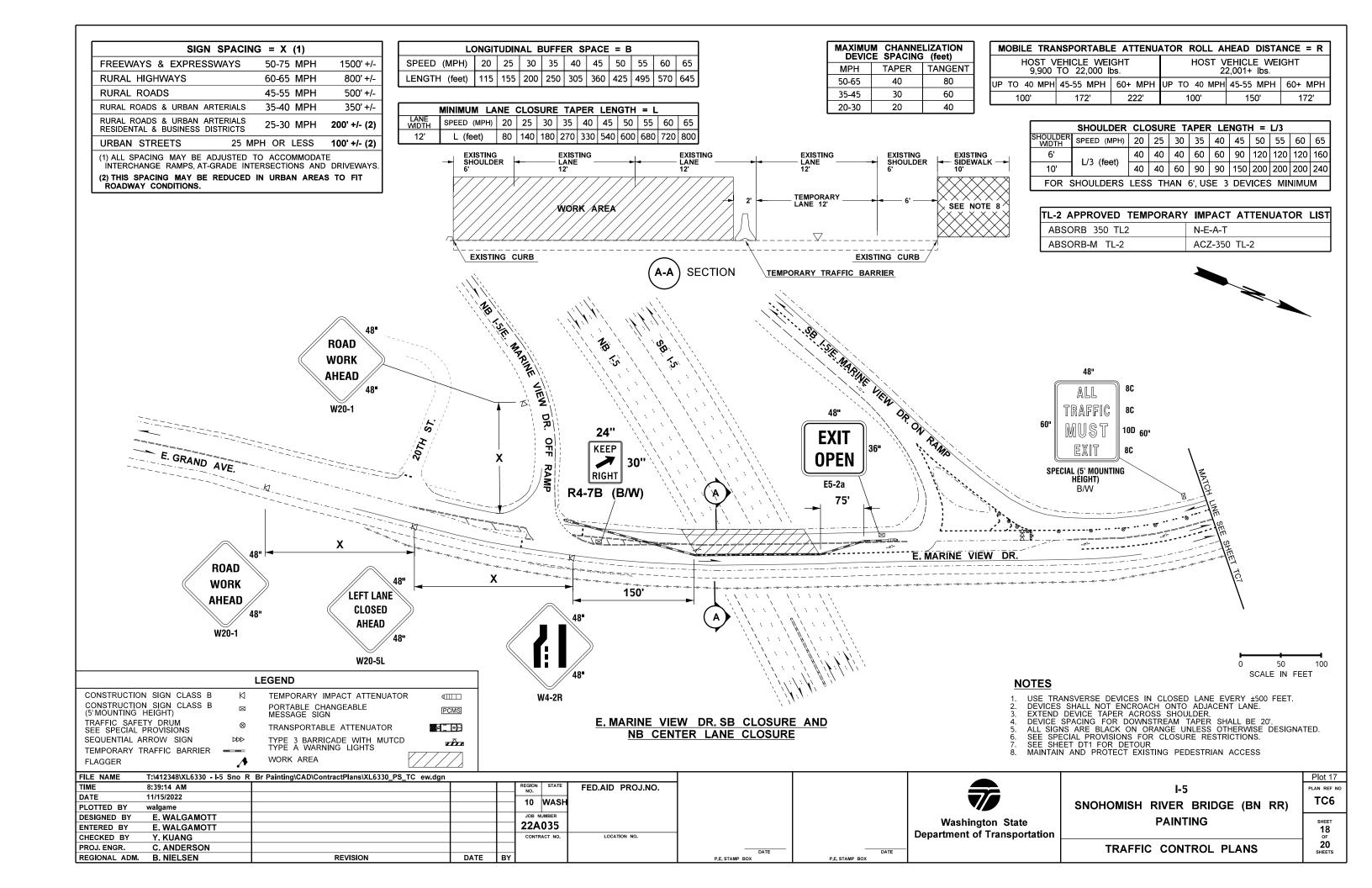












SIGN SPACING	G = X (1)	
FREEWAYS & EXPRESSWAYS	50-75 MPH	1500' +/-
RURAL HIGHWAYS	60-65 MPH	800' +/-
RURAL ROADS	45-55 MPH	500' +/-
RURAL ROADS & URBAN ARTERIALS	35-40 MPH	350' +/-
RURAL ROADS & URBAN ARTERIALS RESIDENTAL & BUSINESS DISTRICTS	25-30 MPH	200' +/- (2)
URBAN STREETS 25 MF	PH OR LESS	100' +/- (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

LONGITUDINAL BUFFER SPACE = B												
SPEED (MPH)	20	25	30	35	40	45	50	55	60	65		
LENGTH (feet)	115	155	200	250	305	360	425	495	570	645		

	MINIMUM LA	NE	CLOS	SURE	TA	PER	LEN	GTH	= L		
LANE WIDTH	SPEED (MPH)	20	25	30	35	40	45	50	55	60	65
12'	L (feet)	80	140	180	270	330	540	600	680	720	800

I	MAXIMU DEVIC	M CHANNE E SPACING	LIZATION (feet)
I	MPH	TAPER	TANGEN
I	50-65	40	80
I	35-45	30	60
I	20-30	20	40

MOBILE TRA	NSPORTABL	E ATTENU	ATOR	ROLL A	HEAD DISTA	NCE = R		
	EHICLE WEI TO 22,000 II		HOST VEHICLE WEIGHT 22,001+ lbs.					
UP TO 40 MPH	45-55 MPH	60+ MPH	UP TO	40 MPH	45-55 MPH	60+ MPH		
100'	100' 172' 2			00'	150'	172'		

SHOULDER CLOSURE TAPER LENGTH = L/3											
SHOULDER WIDTH	SPEED (MPH)	20	25	30	35	40	45	50	55	60	65
6'	L/3 (feet)	40	40	40	60	60	90	120	120	120	160
10'		40	40	60	90	90	150	200	200	200	240
FOR SHOULDERS LESS THAN 6, USE 3 DEVICES MINIMUM									M		

